



# The power difference

### Not all power is created equally

Understanding the power rating of solar panels is important. For most solar panel manufacturers the Power Class of the panel is integrated directly into the part name. So every 225 watt panel should therefore generate 225 watts throughout the lifetime of the module, right? Wrong! It is important to look



power

beyond the label name as all power is not created equally. Canadian Solar is leading the industry to provide the most accurate power ratings to our customers, resulting in savings for years to come. When it comes to power rating, Canadian Solar offers unique products and benefits for the Ontario market including **plus power** and **LID Adjusted** labeling.



**Usage hours** 

#### **Plus 5 Watt Tolerance**

Measuring the output of a photovoltaic panel is not trivial. In the real world the output of a panel depends on many different variables such as sunshine, temperature, time of year, etc. Therefore, it was necessary to develop an industry standard for measuring power output. Today, all panels are tested at Standard Test Conditions (STC) in the factory before shipping. Most manufacturers guarantee their panels to perform within a  $\pm$  tolerance, usually ranging from  $\pm$  3% to  $\pm$  5%. Canadian Solar has gone a step further and uses an industry leading  $\pm$  5 / -0 watt tolerance called plus power that sets the standard.

#### **Light Induced Degradation (LID)**

It is a well known phenomenon that all crystalline silicon based solar panels lose between 1% and 5% of their power generating capacity within the first 24 – 72 hours of sun exposure. This is referred to as Light Induced Degradation or LID. Fortunately, the drop in efficiency stops after a few days and the silicon based solar panels are extremely stable over the remainder of their long lifespan. Canadian Solar is the only manufacturer that adjusts its labelled power to take this LID effect into account. We take the STC Power of our panels and adjust the label designation downward to the power the customer will get after the LID. Simply put, you don't pay for power that disappears within less than a week after the panels have been installed.

### 225/230/235/240 watts





## The clear advantage

Label	(CS6P 225W)	(CS6P ) 230W	(CS6P) 235W	(CS6P) 240W)
Tolerance	± 5%	± 5%	± 5%	± 5%
STC Power Range (W)	227.4 - 232.4	232.4 - 237.4	237.5 – 242.5	242.5 – 247.5
Average STC Power (W)	229.9	234.9	240.0	245.0
Average LID Loss	1.00%	1.00%	1.00%	1.00%
Power Range after 72 hours (W)	225.1 – 230.0	230.1 – 235.0	235.1 – 240.0	240.1 - 245.0
Average Power after LID (W)	227.6	232.6	237.6	242.6
Minimum Power (W)	225	230	235	240

### The Canadian Solar advantage goes even further.

Our tight tolerances and accuracy in labeling allow systems using Canadian Solar Panels to be more efficient by minimizing mismatch losses and maximizing the string sizes for inverters. This can result in an **additional 1-4% savings** on top of what we're already saving you with our industry leading **plus power** and **LID Adjusted panels**. Additionally all our panels have a third party **Insured Product Warranty** to warrant them for 25 years.

Clearly Power is not always Power.
When purchasing your solar panels
consider the Canadian Solar advantage.





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Power you can rely on. A company you can depend on.